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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 10/579,039 | 05/10/2006 | Daniel Hendrix | 016906-0512 | 4979 |
| 22428 | 7590 | 01/22/2009 | EXAMINER | |
| FOLEY AND LARDNER LLP | | | WALBERG, TERESA J | |
| SUITE 500 | | | | |
| 3000 K STREET NW | | | ART UNIT | PAPER NUMBER |
| WASHINGTON, DC 20007 | | | 3744 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 01/22/2009 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-------------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/579,039 | HENDRIX ET AL. |
| | Examiner Teresa J. Walberg | Art Unit 3744 |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 October 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 and 5-14 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 and 5-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 May 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. Claims 1 and 2 are objected to because of the following informalities:

In claim 1, at line 8, there is no antecedent basis for the radiator.

In claim 2 at line 1 it is unclear whether "the region" refers to the end region of the disks or to the entry or exit regions.

Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-7, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Dimitriou (4,572,766).

Dimitriou discloses a heat exchanger of disk type construction (Fig. 7) with two adjacent disks defining an intermediate space through which a heat exchange medium flows (see abstract), the entry and/or exit region of the heat exchange medium is expanded (interpreted to mean wider than tall) on the discharge or inflow side (24 in Fig. 3), an opening (24) for the second medium is located in an end region of the disks (Fig. 3) and extends over essentially an entire surface of the end region (Fig. 3), heat exchanger passages (32, 33) are located in the end region of the disks so that they (32, 33) are offset axially in an axial direction of the disks (see Fig. 3) from the opening for the second medium

(24) and are located further inward from the end of the disks than the opening for the second medium (see Fig. 3), the region runs at least over a third of the width of the disk perpendicularly to the average flow direction (24 in Fig. 3), with at least two heat exchanger medium passages being provided per inlet or outlet (Fig. 7), the disks being of axially symmetrical design (Fig. 7).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitriou (4,572,766).

Dimitriou discloses a heat exchanger having the claimed structure with the exception of the heat exchanger being a charge air coolant radiator or oil cooler. However, charge air coolant radiators and oil coolers are conventional in the art. It would have been obvious in view of to one of ordinary skill in the art to use the heat exchanger of Dimitriou as a charge air coolant radiator or oil cooler, the motivation being to bring the fluids in question to a desired temperature.

6. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitriou (4,572,766) in view of Voss (US 5,230,966).

Dimitriou discloses a heat exchanger having the claimed structure with the exception of the heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees.

Voss discloses a heat exchanger of disk type construction having a heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees (see 61 in Fig. 4).

It would have been obvious to one of ordinary skill in the art in view of Voss to provide the heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees in the heat exchanger of Dimitriou, the motivation being to provide a more even fluid flow across the plate.

7. Applicant's arguments with respect to claims 1-3 and 5-14 have been considered but are moot in view of the new ground(s) of rejection.
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/

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|-----------------------------------|--|-------------------------------|---|-------------|
| Notice of References Cited | | Application/Control No. | Applicant(s)/Patent Under Reexamination HENDRIX ET AL. | |
| | | Examiner Teresa J. Walberg | Art Unit 3744 | Page 1 of 1 |

U.S. PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|--|-----------------|-----------------------|----------------|
| * | A | US-4,572,766 | 02-1986 | Dimitriou, Michael H. | 165/167 |
| | B | US- | | | |
| | C | US- | | | |
| | D | US- | | | |
| | E | US- | | | |
| | F | US- | | | |
| | G | US- | | | |
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| | M | US- | | | |

FOREIGN PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification |
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NON-PATENT DOCUMENTS

Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)

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| | W | |
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.